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Gregory Varner* (gvarner@jbu.edu). *Unique Measure for the Time-Dependent Navier-Stokes Equations.*

An extension of results concerning the uniqueness of measure for time-homogeneous Markov processes to the time-inhomogeneous case is applied to the random Navier-Stokes equations. In particular, we will discuss the necessary conditions for the associated measures to be exponentially mixing. A specific example that will be considered is the two-dimensional Navier-Stokes equations on the sphere under time-dependent deterministic force and a random kick-force activated by a dirac or an indicator function. The necessary conditions for the existence and uniqueness of the measure for the system will be discussed. (Received September 06, 2017)